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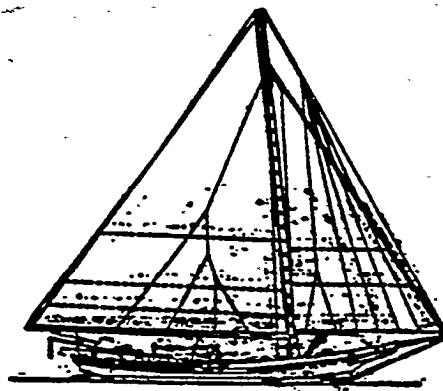
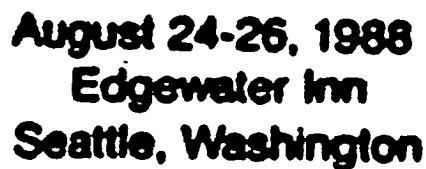
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# System Strategy Teams: A Participative Management Adaptation

No. 2A

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## ABSTRACT

"Management in the United States often falls into the trap of invoking Theory Y programs in Theory X ways" (1). Perhaps nothing conceptualizes the plight of American businesses implementing new programs and techniques quite as succinctly as the preceding statement. Many of the buzz words of celebrated methods and techniques used in Japan have been popularized in the U.S. Unfortunately, the implementation of these techniques is not given the careful consideration it demands.

Although participative management did not achieve full potential in the U.S. with the introduction of quality circles, the foundation was laid and lessons were learned. The organization and operation of a company needs to be considered for a successful implementation. System Strategy Teams represent an adaptation of participative management developed specifically to function within Peterson Builders.

## BACKGROUND

Peterson Builders, Inc., is a small, nonunion shipyard in the Midwest. At this point, PBI's major contracts are solely with the U.S. Navy. Currently, most of PBI's work is generated by contracts for wooden hulled mine countermeasure ships. Although detail design is not done inhouse, an Engineering staff is maintained that works closely with the subcontracted design agent.

As PBI moved into the minesweeper contract, more and more problems surfaced. Problems with design had a rippling effect all the way down the line. The more problems that occurred, the more adversarial departments became. Adversarial relationships were even occurring within departments. The lack of communication and lack of direction were evidenced in manpower overruns, excessive rework, and an inordinate amount of scrap material. The nature of the vessel generated many restrictive requirements necessitating penetration

through bureaucratic policies and procedures for any deviations from specifications. In the Pipe Shop, the problems were accentuated because of the complexity and extensiveness of the piping systems. Many programs and techniques were tried to improve the situation, but none were given the conviction, or support, or direction necessary to be effective.

After approximately four years into the contract, upper management issued a directive to determine what was responsible for the problems the Pipe Shop experienced and determine the impact of trying different programs and techniques for problem resolution. After some discussion, it was decided that it would be much more effective to direct efforts toward preventing recurrence. It was decided that a team needed to be developed which could cross departmental boundaries and solve system problems. Supervision had recently changed in both Piping Engineering and Piping Production and the new supervisors recognized the need for a change. It was an ideal time to invoke a participative management program.

## SYSTEM STRATEGY TEAM

### Conception

With the initial charter of finding out what was responsible for the minesweeper problems, over twenty interviews were conducted with people involved in the piping system design to products process. Once the charter changed, it was easy to choose participants. The following criteria were most applicable. A good candidate

recognizes that there is a problem and a change must occur.

has the power to induce change. This does not necessarily mean they have the authority or responsibility to induce change. It means they are in a position to influence and support.

is not afraid to admit that he is fallible.

is willing to contribute.

- is a key player - instrumental to a smooth flowing system.

Many of the people interviewed would have been good candidates for the team, but, importantly, the group was kept small and balanced (ten members). Engineering, Production, Purchasing, Planning and Testing are represented on the team. The candidates were asked to participate - offered an alternative.

The idea of a team first met with some skepticism. Interdepartmental meetings had been held before and had turned into "finger-pointing" sessions. One major difference was to concentrate on problem solving - not problem finding. Additionally, upper management was asked to not attend the first few meetings to keep participants from feeling they had to defend their department. An open exchange was fostered.

### Development

System Strategy Teams were strongly modeled after Performance Action Teams (PAT's). PAT's originally evolved from studies performed at Ohio State and continued at Oklahoma State University (1). The purpose of PAT's is to directly and positively impact the productivity of an organization. Originally titled Productivity Action Teams, the name of the process was changed to Performance Action Teams to capture the extensive and integrative aspects of the concept.

PAT's are three to four member committees of a larger group, Performance Action Group (PAG), assigned to solve a specific problem. The PAG, formed by key people from various areas, addresses problems identified and prioritized by the group. The solutions are presented to management, at which point management has the alternative to modify, implement, or reject a proposal.

PAT's offer a definite advantage over Quality Circles. An organization is a series of related and integrated sections. It must be viewed as such. The majority of problems cross departmental lines. Although Quality Circles get the people involved who are effected, they do not have the jurisdiction to cross departmental lines. They cannot solve system problems.

At Peterson Builders, there was an additional problem. So many techniques and programs had already been tried that employees viewed a new program as another halfhearted, unsupported waste of time. It was critical to program success for the control of implementation to lie in the hands of the participants. The level of the employees in

the group allowed this. If not directly involved in implementing changes in his area, the participant was very influential.

The most distinguishing factor of the System Strategy Team is its ability to solve problems within the group. Problem solving and solution implementation lie in the hands of the people directly effected.

Although the absence of upper management at the first few meetings insured against department defenders and promoters, it became evident that the team did need to see that there was upper management support. They needed to see that upper management was acknowledging their efforts. If it was known in advance that one of the vice presidents would be attending the meeting, the result was complete attendance.

### Evolution

The team evolved surprisingly fast. While initially making a superficial attempt at problem solving (looking at symptoms of the problem rather than the problem) the group evolved and began to address true system problems, thereby taking advantage of the experience and ideas of those involved.

Before this was accomplished, the group had to feel that they could be effective - that they did have some control. Also, they needed to feel like a team working toward a common goal.

The composition of the group has also changed. Depending on the identified problem, people have been added to the group or "put on reserve". The number in the problem solving group has stayed quite constant (around ten). The original participants still receive weekly memos so they are familiar with progress and problems.

### Technique

A brainstorming session was conducted to generate a list of problem areas. The list was then reviewed. Problems were eliminated if they really fell outside the scope of the team (i.e., design agent error) or if the problem was too extensive for a beginning team to undertake. Similar problems were combined.

The group was asked to vote on the altered list of problems. Each team member prioritized the three major problems he viewed as most serious. The weighted votes were tallied and scores were assigned to each problem.

"Drawing Accuracy" was targeted as the topic for most concern that the group could quickly and successfully address. After generating a list of

problems associated with drawing inaccuracies, the group voted and the top three problems were listed. Volunteers were asked to pick one of the three topics, become subgroup leaders and pick two other people to address the problem. The team facilitator became a member of each subgroup.

The first subgroup, "Pipe Detail Problems", addressed the problems associated with prefabricated piping units. The final result was a presentation given to Engineering by the Pipe Detail subgroup regarding information that needed to be included and standardized among Engineering.

The "Bill of Material Inaccuracies" subgroup also delivered a presentation to Engineering regarding complete, correct, standardized information.

The third subgroup, "Loss of Realistic Design Approach", chose to look at the problems caused by lack of communication between Engineering and Production. Part of the solution included sending an Engineer with a Production worker for a week. The people involved gained a mutual respect for the other's position.

The approach used by the subgroup for developing and implementing a solution is quite dependent on the subgroup leader. Although the first set of solutions was superficial, major progress was made. The team learned that they could work together and they would receive management support. Additionally, other groups were started with outside support. From the "Loss of a Realistic Design Approach" subgroup, an Accuracy control program that had been previously dropped was once again started.

The team has now reorganized and is analyzing each piping system. Preferred methods and materials are being recorded in addition to past problems encountered. The manual will be used by detail designers. Plans also include a maintenance scheme.

### Results

The results have thus far exceeded expectations particularly in the area of improved communication between departments. Point nine of Demings 14 points for management specifies "Break down barriers between staff areas." (2) Improved relations will play a major role in avoiding recurrence of problems.

The team is currently working on a set of standards for the detail designer that will indicate preferred methods and materials. Completion of the project should trigger similar

projects in other areas of the yard.

### FUTURE DIRECTION

The success of the Piping area team generated teams in the Electrical and Hull areas. Both teams are still in the early stages of development evidenced by a tendency to look at problem symptoms and by a suspicious attitude toward management's commitment to participative management.

The Hull team was just recently started, but it appears they will be successful.

Although the Electrical team started before the Hull team, they are progressing at a slower pace - probably much of this is due to personality clashes within the team. Another factor is that the Electrical team started out trying to solve a deep and involved problem and success will not come easily. If they fail, they may not have the desire or conviction to continue. Working on a superficial problem to achieve quick success and establish team spirit may be an essential step in the evolution of the team. The fate of the team rests on their ability to effectively implement their proposal and their succeeding reaction.

The Piping team is quite autonomous. Problems are identified and the people best suited to solve the problem are asked to participate.

### CONCLUSION

Productivity suffers for many reasons, but perhaps the most inexcusable reason is lack of communication. Participative management provides a platform for open communication. The real value of System Strategy Teams lies in their power to cross departmental lines - to follow the system through.

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